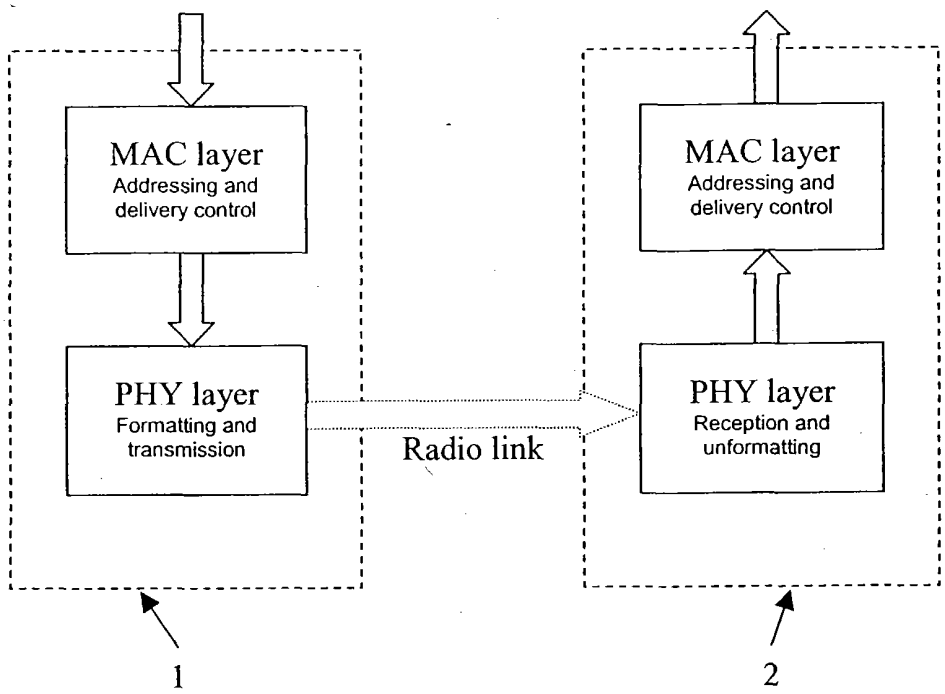
MAC layer
Addressing and delivery control
PHY layer
Formatting and transmission
Radio link
MAC layer
Addressing and delivery control
PHY layer
Reception and unformatting
1
2

Figure 1

MAC header	Frame body	FCS
32	N	4

Figure 2a

MAC header	Frame body										FCS
	FEC	DATA	FEC	DATA	FEC	DATA	FEC	DAT	*FCS*	FEC	
32	16	208	16	208	16	208	16	4-208		16	4

Figure 2b

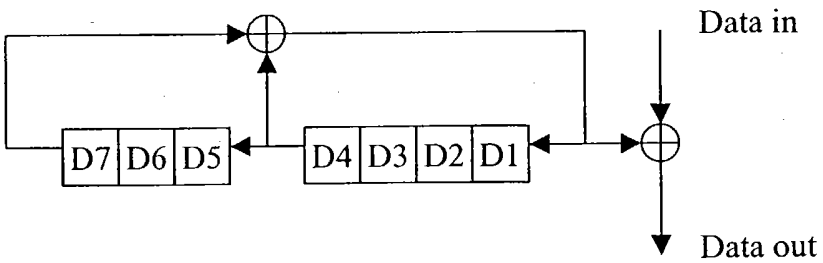

Figure 3

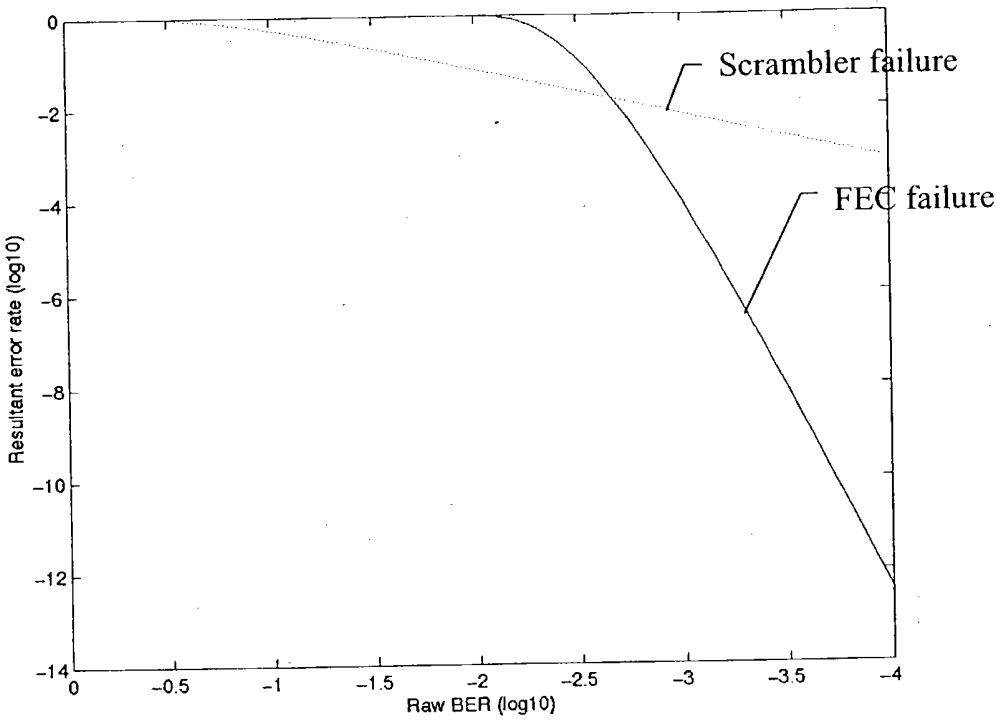
Scrambler failure
FEC failure
Resultant error rate (log10)
Raw BER (log10)
0
-2
-4
-6
-8
-10
-12
-14
0
-0.5
-1
-1.5
-2
-2.5
-3
-3.5
-4

Figure 4

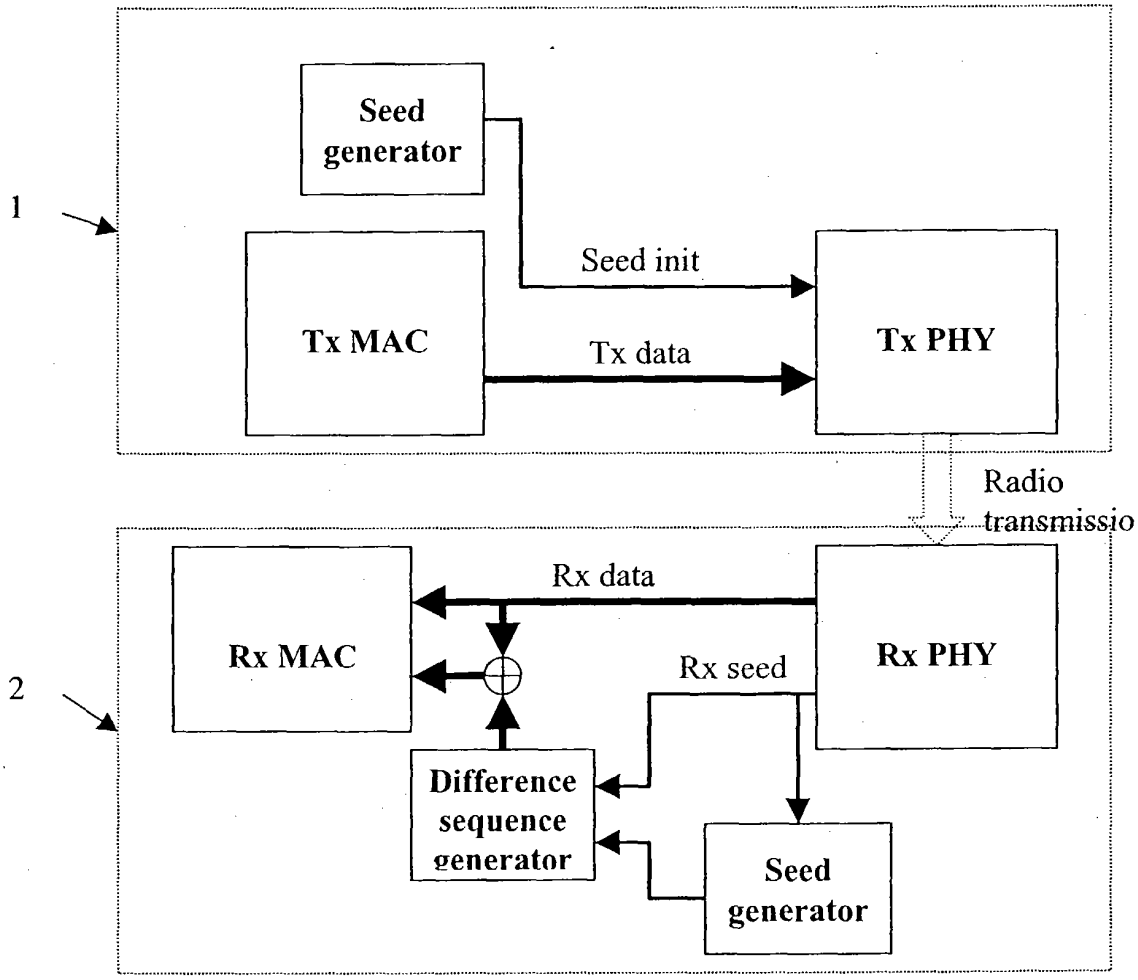
1
Seed generator
Seed init
Tx MAC
Tx data
Tx PHY
Radio transmissio
2
Rx data
Rx MAC
Rx PHY
Rx seed
Difference sequence generator
Seed generator

Figure 5

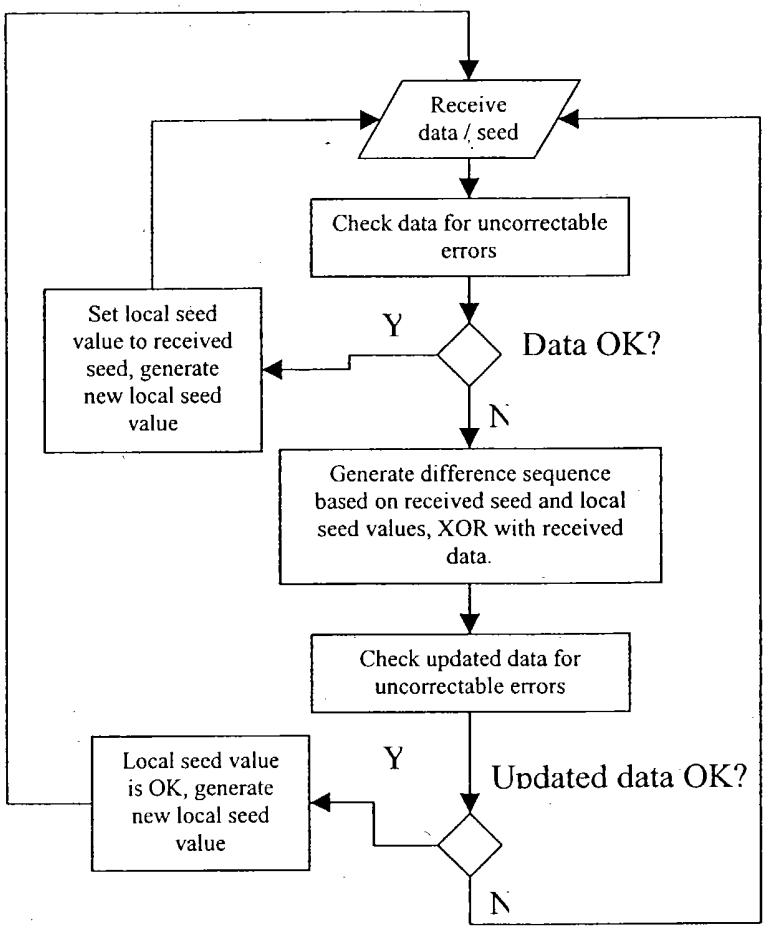
Receive data / seed
Check data for uncorrectable errors
Data OK?
Y
N
Set local seed value to received seed, generate new local seed value
Generate difference sequence based on received seed and local seed values, XOR with received data.
Check updated data for uncorrectable errors
Updated data OK?
Y
N
Local seed value is OK, generate new local seed value

Figure 6

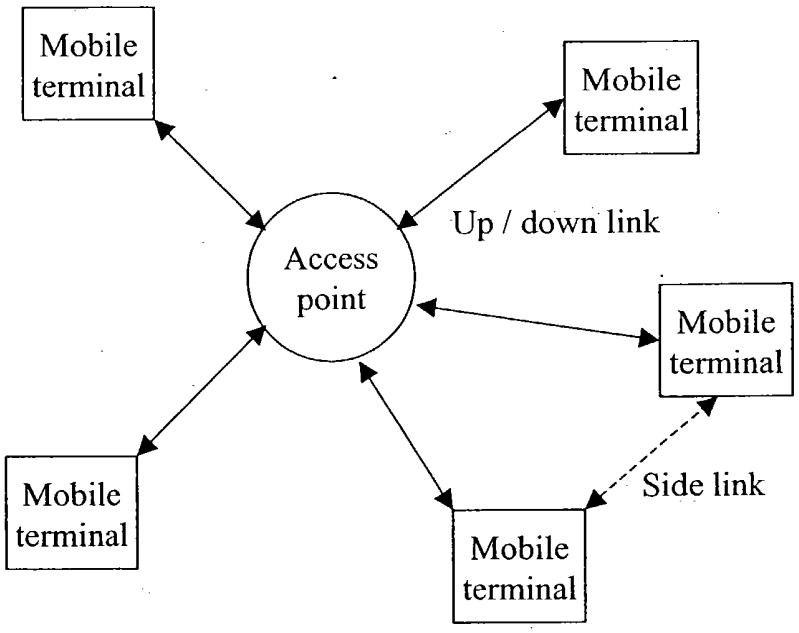
Mobile terminal
Mobile terminal
Up / down link
Access point
Mobile terminal
Mobile terminal
Side link
Mobile terminal

Figure 7

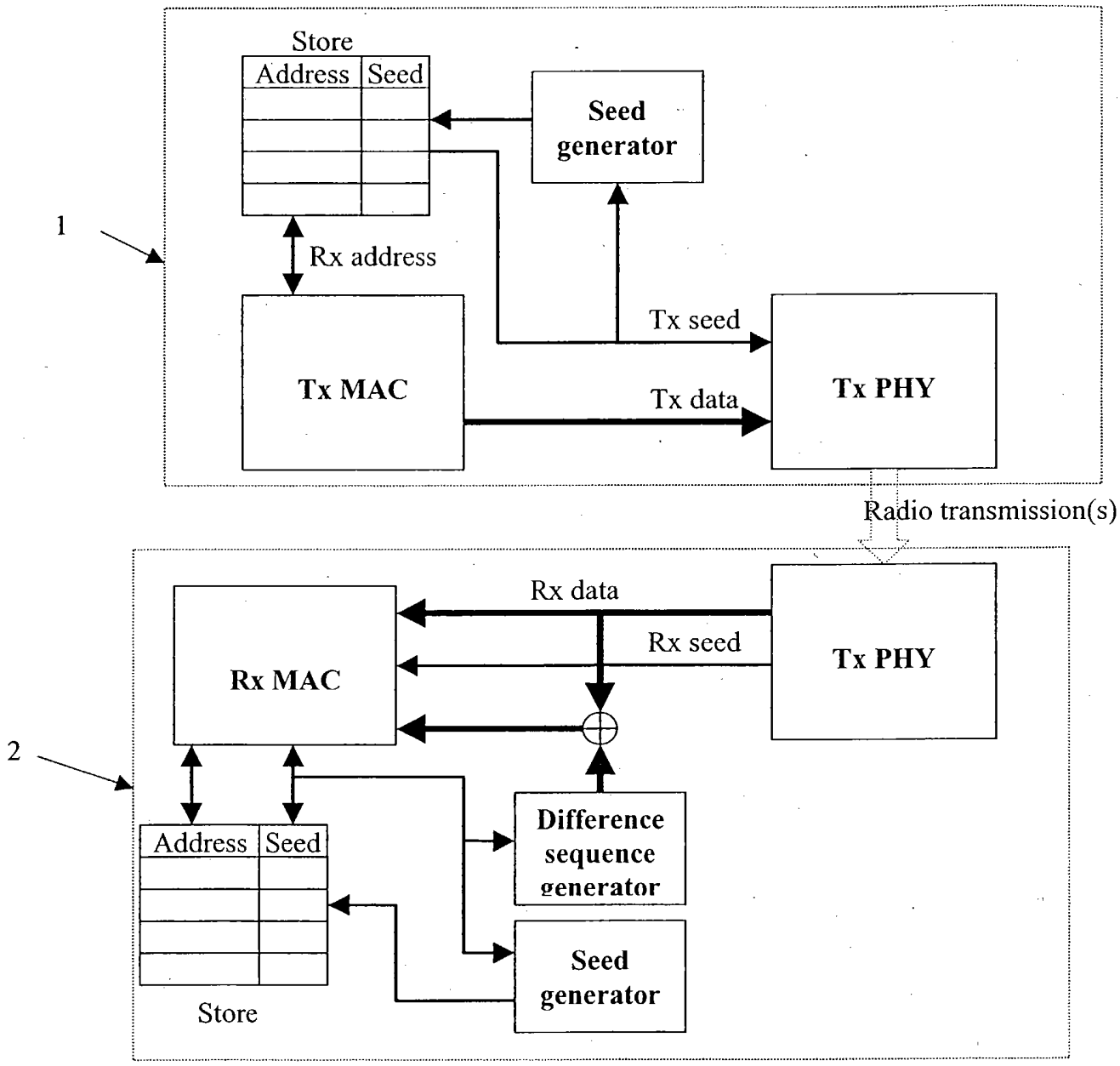
Store
Address
Seed
Seed generator
1
Rx address
Tx seed
Tx MAC
Tx data
Tx PHY
Radio transmission(s)
Rx data
Rx seed
Rx MAC
Tx PHY
2
Address
Seed
Difference sequence generator
Seed generator
Store

Figure 8

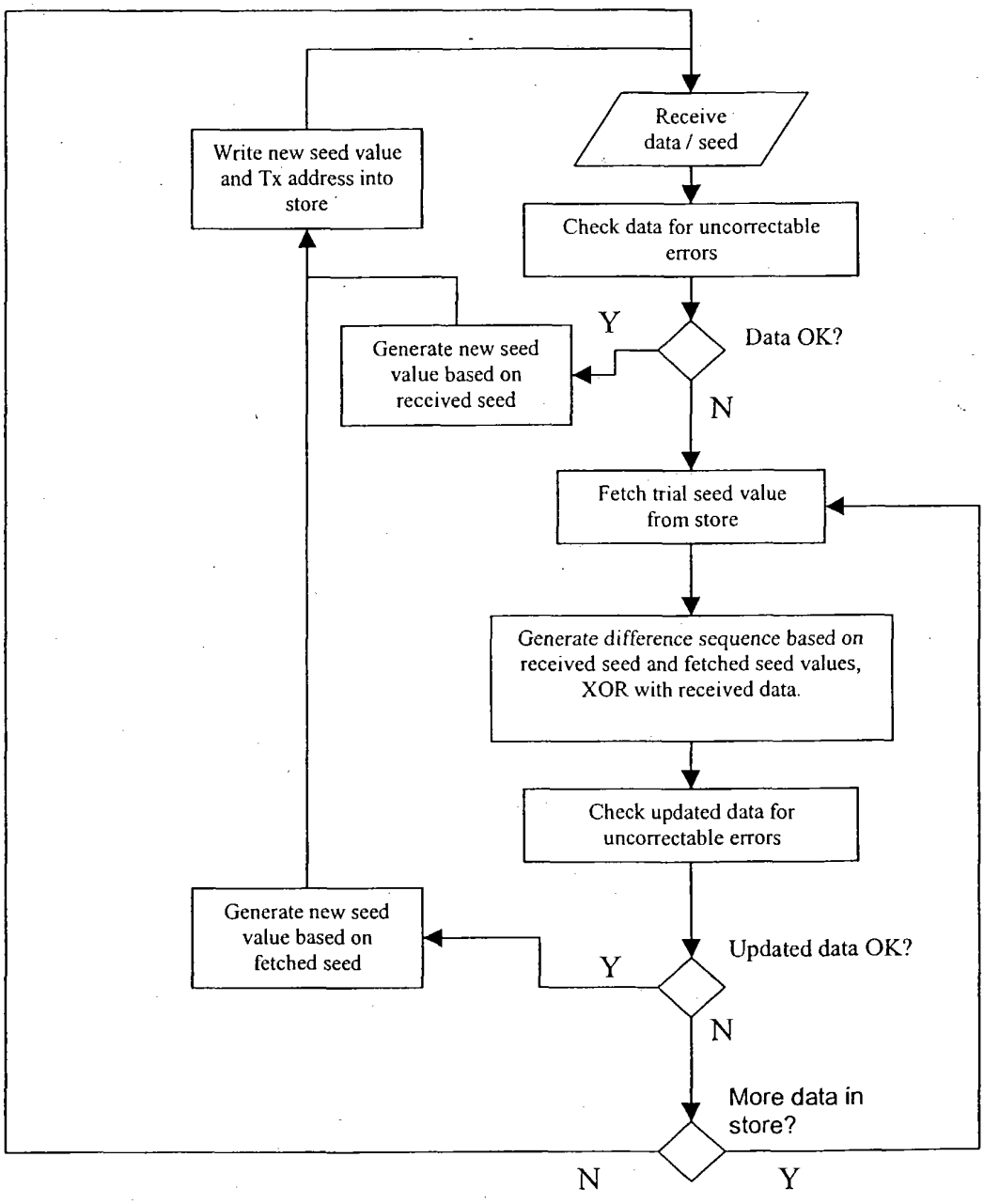
Receive data / seed
Check data for uncorrectable errors
Data OK?
Y
N
Generate new seed value based on received seed
Write new seed value and Tx address into store
Fetch trial seed value from store
Generate difference sequence based on received seed and fetched seed values, XOR with received data.
Check updated data for uncorrectable errors
Updated data OK?
Y
N
Generate new seed value based on fetched seed
More data in store?
N
Y

Figure 9